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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,311	12/16/2003	Dennis Kelly	1-24296	5955
46582	7590	05/26/2006	EXAMINER	
MACMILLAN, SOBANSKI & TODD, LLC ONE MARITIME PLAZA - FOURTH FLOOR 720 WATER STREET TOLEDO, OH 43604			BURCH, MELODY M	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/737,311	Applicant(s) KELLY ET AL.	
	Examiner Melody M. Burch	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 23-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 23, 25, 26, 30, 31, 33, 34, 39, 40, 41, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5865275 to Anger et al. in view of US Patent 3279564 to Gancel.

Re: claims 23, 31, 39, 40, and 45. Anger et al. show in figure 3 a method for producing a vehicle brake assembly comprising providing a backing plate 12 having a centrally located first aperture formed therein shown in the area surrounding element number 24, the backing plate 12 or at least portion of backing plate 12 shown in area of element 24 (labeled element 20 in figure 2) adapted to support a drum brake shoe assembly 10 of a drum in hat parking and emergency brake, and a one piece integral stamp formed drum in hat adapter 16 shown in figure 3 and disclosed in col. 3 line 5 having an abutment member 30 and a pair of ears one of which is shown in the area of the lead line of number 16 formed integral therewith, the one piece integral stamp formed drum in hat adapter having a centrally located second aperture as shown and a plurality of smaller mounting apertures shown to the left of the lead line of number 16 and to the right of the lead line of number 30 and disclosed in col. 3 line 6 formed therein about the centrally located first aperture thereof, the abutment member

protruding from the one piece stamp formed drum in hat adapter and including an appropriately shaped profile for directly receiving an associated end of a pair of brake shoes of the drum brake shoe assembly as disclosed in col. 2 lines 64-67.

Anger et al. disclose the abutment member being integrally formed therewith by a casting process, but are silent as to forming the abutment member therewith by the metal stamp process.

Gancel teaches in col. 2 lines 37-49 the limitation of an abutment in a disk brake assembly being integrally formed by a metal stamp forming process.

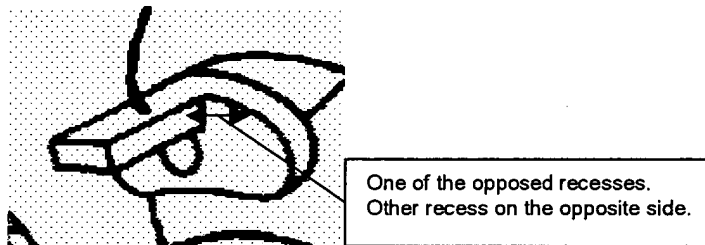
It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the abutment forming process employed by Anger et al. to have included a metal stamp process, in view of the teachings of Gancel, in order to provide a means of forming an abutment member that enables device thicknesses to be selectively tweaked to satisfy strength requirements without being subject to forming process constraints as suggested by Gancel in lines 40-46 of col. 2.

Re: claims 25 and 33. Anger et al., as modified, show in figure 3 of Anger et al. the limitation wherein the adapter functions as an axle flange and is adapted to be secured to a vehicle axle tube as disclosed in col. 2 line 53.

Re: claims 26 and 34. Anger et al., as modified, show in figure 3 the assembly further including an axle flange or the inner portions of the unnumbered rotor in front of element 12, the axle flange adapted to be secured to an axle tube disclosed in col. 2 lines 53-56 which in turn is adapted to extend through the centrally located first and second apertures of the backing plate and the adapter, respectively.

Re: claim 41. Anger et al., as modified, show in figure 3 the limitation wherein the adapter includes at least one raised solid projection shown in the area of the lead line of number 16 formed thereon or in an alternate interpretation wherein the adapter includes at least one raised solid projection in the area of the lead line of 30 formed thereon.

Re: claims 30 and 44. Opposed recesses are shown below in the modified version of a portion of Anger et al. figure 3.



Re: claims 24 and 32. Anger et al., as modified, show in Anger et al. the limitation wherein the backing plate includes at least one raised hollow projection shown surrounding element 22 and the adapter includes at least one raised solid projection 30 which is adapted to be received into the at least one raised hollow projection.

Anger et al. fail to disclose how elements 16 and 24 are secured.

Anger et al. teach in the prior art section the use of a backing plate being fastened to an adapter via bolting as taught in col. 1 lines 51-52. Such an attachment can be considered as a form of metal forming operation, as broadly claimed, since the use of bolts for connecting causes the metal of one of the elements to be connected extending around the bolt to expand a small amount.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the means to fasten the backing plate to the adapter to have included bolting, as taught by the prior art section of Anger et al., in order to provide an old and well-known means of connecting the backing plate to adapter for proper functioning of the brake assembly.

Re: claims 27, 35, and 42. Anger et al., as modified, describe the invention substantially as set forth above, but do not include the limitation of the adapter being formed from carbon steel or high strength low alloy material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the adapter being formed from carbon steel or high strength low alloy material since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Re: claims 28, 36, and 43. Anger et al., as modified, show in figure 3 of Anger et al. the adapter having a generally uniform thickness.

Anger et al. do not include the limitation of the thickness specifically being approximately 12.5 mm.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the thickness of the adapter of Anger et al., as modified, to have been 12.5 mm or any other appropriate thickness, as best determined by routine experimentation, since it has been held that discovering an optimum value of

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a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

Re: claim 38. Opposed recesses are shown in the modified version of a portion of Anger et al. figure 3 on pg. 4 of the Office action.

3. Claims 29, 37, 30, 38, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5865275 to Anger et al. in view of Gancel and further in view of US Patent 5884732 to Anger et al.

Re: claims 29 and 37. Anger et al. '275, as modified, describe the invention substantially as set forth above, but do not include the claimed hole/aperture arrangement. Anger et al. '275 include the holes in the respective ears shown in the area of the lead line of number 16 in an alternate interpretation, but lack the presence of a plurality of smaller mounting apertures formed therein about the centrally located first aperture of the adapter.

Anger et al. '732 teaches in figure 3 the use of an adapter 31 with a plurality of mounting holes formed therein about the centrally located first aperture (in addition to the holes of the ears).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the adapter of Anger et al. '275, as modified, to have included a plurality of mounting apertures, as taught by Anger et al. '732, in order to provide a means of more securely attaching the adapter to the remaining brake components and to reduce the weight of the adapter.

Re: claims 30, 38, and 44. Anger et al. '732 teach in figure 4 the limitation of the abutment member having a pair of opposed slots or recesses 53a,53b formed therein.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the abutment member of Anger et al. '275, as modified, to have included opposed slots, as taught by Anger et al. '732, in order to provide a means of stabilizing the attachment of the brake assembly to improve braking capacity reliability.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb  
May 24, 2006

*Melody M. Burch*  
**Melody M. Burch**  
**Primary Examiner**  
**Art Unit 3683**  
5/24/06